

What is claimed is:

1. A fluid filter cartridge comprising:
  - (a) first and second end caps;
  - (b) a fluid filter media pack defining an open, central, volume; the media pack being secured to, and extending between, the first and second end caps; and
  - (c) a communication/sensor circuit completion unit operably positioned on the first end cap;
    - (i) the communication/sensor circuit completion unit being configured to complete a selected communication/signal circuit only when the filter cartridge is properly mounted for use;
    - (ii) the communication/sensor circuit completion unit is an optic circuit completion unit; and
    - (iii) the communication/sensor circuit completion unit is a reflector;
      - (A) the reflector being secured to the first end cap and positioned to reflect an optic signal directed into the reflector from the filter cartridge.
2. A fluid filter cartridge according to claim 1 wherein:
  - (a) the reflector is selected from glass and plastic.
3. A fluid filter cartridge according to any one of claims 1 and 2 wherein:
  - (a) the reflector is mounted on an end cap portion which is axially flexible.
4. A fluid filter cartridge according to any one of claims 1-3 wherein:
  - (a) the reflector is mounted on an end cap portion supported by flexible ribs.
5. A fluid filter cartridge according to any one of claims 1-4 wherein:
  - (a) the reflector includes a reflecting surface that is radially symmetric.

6. A fluid filter cartridge according to any one of claims 1-4 wherein:
  - (a) the reflector includes a reflecting surface that is not radially symmetric.
7. A cartridge-style filter assembly comprising:
  - (a) a housing; and
  - (b) a serviceable filter cartridge according to any one of claims 1-6 positioned within the housing.
8. A cartridge-style filter assembly according to claim 7 wherein:
  - (a) the housing comprises a bowl threadably mountable on, and removable from, a filter head.
9. A fluid filter assembly comprising:
  - (a) a filter head having a fluid inlet and a fluid outlet; and,
  - (b) a cartridge-style filter assembly according to any one of claims 7 and 8 removably mounted on the filter head.
10. A fluid filter assembly according to claim 9 wherein:
  - (a) the filter head includes, positioned therein, a transmitter optic fiber and a receiver optic fiber oriented so that the reflector completes an optic signal circuit between the transmitter optic fiber and the receiver optic fiber.
11. A fluid filter assembly according to claim 10 wherein:
  - (a) at least portions of the transmitter optic fiber and receiver optic fiber are mounted on an axially moveable mount.
12. A fluid filter assembly according to any one of claims 10 and 11 wherein:
  - (a) the transmitter optic fiber and the receiver optic fiber are positioned to provide a light circuit from an optic couple on an exterior of the filter head through the reflector and back to the optic couple.

13. A method of evaluating a serviceable filter cartridge mounted in a filter assembly; the method including a step of:
- (a) passing an optic signal from a portion of the filter assembly through the reflector of a cartridge according to one of claims 1-6 and back into the filter assembly.